

harman kardon

The Award Series



**INSTALLATION
AND OPERATING MANUAL**

F 500X

FM STEREO TUNER

UNPACKING

After unpacking the F500X, inspect it carefully for signs of transit damage. The tuner was subjected to numerous rigid quality control inspections and therefore should be in perfect operating condition. If damage is visible, notify your dealer at once. If the tuner was shipped to you, notify the transportation company. Harman-Kardon will cooperate with you in such instances, but please note that only you can recover from the carrier for damages incurred during shipment.

Check the folds of the carton and packing material before discarding. Your package should contain the following items:

- 1 Award Series, Model F500X FM Stereo Tuner.
- 1 Instruction Manual.
- 1 Warranty Card.
- 1 Mounting Template.

INTRODUCTION

The new Harman-Kardon Award Series represents the culmination of extensive research and experimentation in high fidelity component design. These magnificent instruments will satisfy the aspirations of those who insist on nothing short of perfection itself. They also anticipate all of the new developments in high fidelity by including features never before found in high quality components. The keynote in the Award Series is unparalleled performance and no compromise has been made in the design of these superb units.

It is essential you read this instruction manual carefully before installing your F500X FM tuner. You have invested in a high quality electronic instrument and a few moments taken now to read this manual may save considerable time and effort later on. This booklet has been written in simple, non-technical language and by following the recommendations made in the manual you should be able to obtain optimum performance from your stereophonic system.

KEEP THIS INSTRUCTION MANUAL AVAILABLE AT ALL TIMES. IT CONTAINS INDISPENSIBLE TECHNICAL AND SERVICE INFORMATION.

WARRANTY POLICY

We urge you to fill in your warranty card and mail it to the factory without delay to protect your rights under warranty. The Harman-Kardon warranty is not valid unless we have your card on file.

WARRANTY

We warrant each F500X to be free from defects in material and workmanship under normal use and service, and in accordance with the conditions herein below set forth, for a period of 1 year from date of delivery to the original purchaser, and agree to replace or repair any part or parts, with the exception of tubes which are under the manufacturer's 90 days warranty, returned to us within said 1 year, with transportation prepaid and which our examination shall disclose to our satisfaction to have been thus defective. This warranty does not include free labor, nor is it applicable to any instrument which shall have been repaired or altered in any way so as in our judgment to affects its stability or reliability nor which has been subject to neglect, misuse, abuse, negligence or accident nor which has had the serial number altered, effaced, or removed. Neither shall this warranty apply to any instrument which has been connected otherwise than in accordance with instructions furnished by us.

This warranty is expressly in lieu of all other warranties, express or implied, and of all other obligations or liability on our part, and we neither assume nor authorize any representative or other person to assume for us any other liability in connection with the sale of this instrument.

SERVICE POLICY

Harman-Kardon has established a special consumer division to answer all questions pertinent to the installation and operation of your unit. Please feel free to write us at any time and we will endeavor to offer prompt and complete advice.

If your problem cannot be resolved through our combined efforts then we may wish to refer you to one of our authorized warranty stations. The unit must be then shipped via Railway Express, Prepaid to the station designated, accompanied by a brief note describing the exact nature of the difficulty. Under no circumstances should the set be shipped directly to the factory without prior authorization.

INSTALLATION PROCEDURE

Ventilation:

The F500X tuner is well ventilated in itself, but sufficient space must be allowed around it to permit proper air flow. Install the tuner in a manner to allow for unrestricted circulation. When mounting into a cabinet allow at least 3 inches above the tubes. Do not place books or other objects on the cage or in the immediate vicinity of the instrument. Reducing the air flow will result in sharply reduced component and tube life. Caution: When custom installing the tuner do not place it directly over the amplifier. The heat generated by the amplifier may cause deterioration of tuner components.

Power Requirements:

Plug the AC cord into any outlet furnishing 117 volts, 50 or 60 cycle, AC current. The voltage may vary between 105 and 125 volts. An AC convenience receptacle is located on the top of the chassis and is controlled by the on/off switch.

Audio Output:

Two AUDIO OUTPUT receptacles are located on the rear of the tuner chassis. They are used to connect the tuner to your amplifier.

For monophonic operation connect a shielded patch cord between either the Channel A or Channel B AUDIO OUTPUT receptacle and the TUNER or AUX input of your amplifier.

For stereophonic operation connect two shielded patch cords between the Channel A and Channel B AUDIO OUTPUT receptacles and the stereo TUNER or AUX input receptacles of your amplifier.

The special de-emphasis characteristic of the F500X includes the capacitance of the shielded connecting cable supplied with the tuner. If it is required to use a patch cord longer than three feet, please use the following chart to determine cable type.

LENGTH OF CABLE	CABLE TYPE
3 feet	Shielded patch cord
3-10 feet	RG 59/U
10-20 feet	RG 71/U

Connecting the FM Antenna:

Due to the exceptionally high sensitivity of the F500X the 48 inch wire antenna supplied with the tuner is sufficient for all but the most difficult locations. The antenna input is designed to accept either the wire antenna or a balanced 300Ω antenna, indoor or outdoor type.

When using the wire antenna supplied, the link between the ground terminal and the center terminal should be connected, and the wire antenna is to be connected to the third terminal marked "connect link to use wire antenna".

When using a balanced 300Ω antenna, remove the link and connect the antenna on terminals marked "remove link to use 300Ω antenna".

In more remote locations, an outside Yagi, folded dipole or omni-directional antenna is recommended. For the greatest gain, a 4 to 11 element Yagi designed for the FM band is suggested. A Yagi, however, is very directional and it may be desirable to use an antenna rotor if a full 360° coverage is required. For reception in the suburbs, an outside folded dipole or omni-directional dipole is recommended.

Grounding:

It is not generally recommended to ground the F500X to your companion amplifier as this may result in a ground loop which will introduce hum into your system.

OPERATING INSTRUCTIONS

The F500X incorporates the following operating controls: Automatic Frequency On/Off Switch, Mode Selector, Range Selector, Interchannel Muting Switch, Illuminated Push-Button On/Off Switch, Balance Tuning Meter, Tuning Control, and Multiplex Scratch Filter.

Illuminated Push-Button On/Off Switch:

This control turns the tuner on and off. It also controls the AC convenience outlet located at the rear of the tuner.

Automatic Frequency Control Switch:

FM broadcasting, by its very nature, eliminates almost all natural and man-made static. However, the characteristics of FM which make this possible also causes specific problems in tuning. The F500X incorporates a special electronic circuit known as AFC (automatic frequency control) that overcomes these problems and insures proper tuning even if the manual tuning is not accurately done. Therefore AFC always keeps the station in the center of the channel and eliminates distortion caused by inaccurate tuning.

It should be made quite clear that AFC is not a means to eliminate tuner drift. A fine wide band tuner will not drift even upon warm-up whether AFC is in the circuit or not.

The following experiment will lead to an understanding of AFC and how it performs its job.

Throw the AFC switch located on the front panel to "ON". Now tune across the FM band and note how the stations "pop" into place. Now tune to any station, preferably one with a musical program. Defeat the AFC circuit by throwing the AFC switch to "OFF", and tune slowly through the station from left to right. Notice there are three distinct points where the station sounds clear, interspersed with points of distorted sound. The middle, clear-sounding point is the proper tuning position for the best tone quality with minimum noise, distortion and interference. Detune the station slightly so that the sound is distorted. Now throw the AFC switch "ON" and notice how the station retunes itself and the sound clears up. The AFC circuit has readjusted the electronic circuits to the center of the station channel.

In order to take full advantage of the benefits of AFC, it is suggested that fine tuning be done with the AFC switch "OFF". When the station is aurally tuned in, throw the AFC switch "ON" and the AFC circuit will retune your careful tuning